



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,497	09/19/2003	Alexander T. Chenvainu	00216-616001 / OB-211	9179
26161	7590	10/28/2005	EXAMINER	
FISH & RICHARDSON PC			GUIDOTTI, LAURA C	
P.O. BOX 1022			ART UNIT	
MINNEAPOLIS, MN 55440-1022			PAPER NUMBER	

1744

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/666,497	<b>Applicant(s)</b> CHENVAINU ET AL.	
	<b>Examiner</b> Laura C. Cole	<b>Art Unit</b> 1744	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 35 and 37-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35 and 37-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 October 2005 has been entered.

### ***Information Disclosure Statement***

2. In the Information Disclosure Statement (IDS) of 11 October 2005, reference "AH" has previously been cited in another IDS in this Application and reference "BA", a foreign patent document, was not present in the other foreign documents submitted by the Applicant. Reference "BA" which is EP 0 857 026 is cited, however Applicant submitted a reference EP 0 587 026 which does not appear to be appropriate in this Application.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 1744

3. Claims 43-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown, Jr. et al., US 2004/0177462 as evidenced by Kott, USPN 3,196,299.

The applied reference has a common inventor (Thomas Christman) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Brown, Jr. et al. disclose the claimed invention including a support member (20, 22) that is capable of being attached to a power toothbrush, the support member including a lower portion (bottom surface portion as shown in Figure 3) capable of being oscillated and a top surface (upper surface portion as shown in Figure 3) having an elongated shape such as an oval (see Figure 2), a plurality of tufts of bristles extending from the support member (28, 34, 36, or 38), and a plurality of elastomeric fins pivotally mounted in and extending from the support member (80; Figures 17-18; Paragraphs 53-54), each fin having a textured surface comprising ribs (82; Paragraph 53). The tufts of bristles and elastomeric fins have at least three different heights (see Figure 3; Paragraphs 33-37 and 54 give specific heights). The tufts of bristles and elastomeric fins are arranged so that their tips define a rounded contour (see Figure 2). Brown, Jr. et al. discloses structure pertaining to a brush head that is capable of extending from a

Art Unit: 1744

neck to be oscillated if a drive mechanism of a power toothbrush were present, as evidenced by Kott, USPN 3,196,299.

4. Claims 43 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Braun et al., USPN 6,553,604 as evidenced by Kott, USPN 3,196,299.

Braun et al. disclose the claimed invention including a support member (12) that is capable of being attached to a power toothbrush, the support member including a lower portion (bottom surface of "12", not shown) capable of being oscillated and a top surface (upper surface of "12" shown in Figure 1) having an elongated shape such as an oval (see Figure 1), a plurality of tufts of bristles extending from the support member (14), and a plurality of elastomeric fins pivotally mounted in and extending from the support member (16; Column 2 Lines 36-37), each fin having a textured surface (inherently the fin surface has a "texture"). The tufts of bristles and elastomeric fins are arranged so that their tips define a rounded contour (see Figure 1). Braun et al. discloses structure pertaining to a brush head that is capable of extending from a neck to be oscillated if a drive mechanism of a power toothbrush were present, as evidenced by Kott, USPN 3,196,299.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1744

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 35 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kott, USPN 3,196,299 in view of Braun et al., USPN 6,553,604.

Kott discloses a power toothbrush comprising a handle (24) having a neck (26) extending therefrom, a motor within the handle (27), and extending from the neck a support member (portion that supports the bristles, unlabeled) including a lower portion (21a) constructed to be oscillated by the motor (Column 2 Lines 52-57, 65-69; Column 3 Lines 21-50), a top surface of the support member having an elongated shape (see Figure 1) wherein a major axis of the elongated shape is disposed generally parallel to a

Art Unit: 1744

long axis of the handle (as shown in Figure 1, the axis extending vertically). Kott teaches a powered device that accepts the heads of conventional toothbrushes so that there is a greater variety of toothbrushes available to a user so that the user has the most desirable bristle hardness, brush contour, etc. and an interchangeable head so that more than one user can use the powered portion of the device (Column 1 Lines 22-36). Kott discloses all elements above, however does not include a brush head having a support member having the shape of an oval, ellipse, or a rounded diamond, or plurality of elastomeric fins extending from the top surface of the support member.

Braun et al. disclose a toothbrush having a head including a support member (12), the support member having a lower portion (10) and a top surface having an elongated shape of an oval (see Figure 1), a plurality of bristles (14) extending from the top surface of the support member, a plurality of elastomeric fins (16) extending from the top surface of the support member having a textured surface (it is inherent that the fin surface has a "texture"), wherein the heights of the bristles and elastomeric fins appear to have three different heights (as shown in Figure 1), and further wherein the elastomeric elements are pivotally mounted on the support member (Column 3 Lines 44-54).

It would have been obvious for one of ordinary skill in the art to provide the toothbrush device of Kott with a manual toothbrush having a toothbrush head having bristle tufts and elastomeric fins of differing heights, as Braun et al. teach, in order to provide a cleaning means wherein there are cleaning elements that are increasingly capable of penetrating and cleaning the space between teeth.

Art Unit: 1744

6. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kott, USPN 3,196,299 and Braun et al., USPN 6,553,604 as applied to Claim 35, in view of Hudson et al., USPN 5,881,425.

Kott and Braun et al. disclose all elements above, however do not disclose that the bristles and elastomeric fins have three different heights.

Hudson et al. disclose the claimed invention including a head (12) that is an elongated support member that appears to be somewhat elliptical or oval (Figure 2), and a plurality of bristles extending from the support member (14, 50, 52), at least some of the bristles have different heights (see Figures 5A and 5B). The bristles have different lengths measured from a top surface of the support member (see Figures 5A-5B). The bristle tufts have at least three different heights (Figures 5A, 5B; Column 6 Lines 49-55, Column 7 Lines 8-14) and are arranged so that the tips define a rounded contour (Figures 4-5B; Column 6 Lines 56-59).

It would have been obvious for one of ordinary skill in the art to modify the heights of the bristles and fins of Kott and Braun to define a rounded contour, as Hudson et al. teach, in order to clean the sides and top of a tooth all at once.

7. Claims 35 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kott, USPN 3,196,299 in view of Halm, 5,813,079 and in further view of Shipp, USPN 5,604,951.

Kott discloses all elements above, however does not include a brush head having a support member having the shape of an oval, ellipse, or a rounded diamond, or plurality of elastomeric fins extending from the top surface of the support member.



Art Unit: 1744

Halm has a support member including a lower portion (bottommost portion of "22" as shown in Figure 2C) capable of being oscillated by a motor (as evidenced by Kott), a top surface having an elongated shape of an oval (see Figure 2A), the major axis of the elongated shape generally parallel to a long axis of the handle (21; see Figures 2A-2B), a plurality of tufts of bristles extending from the surface of the support member (27) and another set of central cleaning elements (24) that are pivotally mounted (see Figure 2D). Halm does not include a plurality of elastomeric fins extending from the top surface of the support member.

Shipp discloses the claimed invention including a head (14) that is an elongated support member (see Figure 3) including a lower portion (16) and a top surface having an elongated shape of an oval (Column 3 Lines 44-48), the lower portion be constructed so that its major axis will be positioned generally parallel to a long axis (see Figures), a plurality of bristles extending from the support member (Column 4 Lines 21-22; 26, 28, 30), and a plurality of elastomeric fins extending from the support member (34 or 36), each elastomeric fin having a textured surface (see Figures 4-5a) wherein the textured surface comprises ribs (see Figures 4-5a, "vanes" 24). At least some of the bristles and elastomeric fins have different heights (see Figures 5 and 5a). Also, the tufts of bristles and elastomeric fins in combination are arranged so that their tips define a rounded contour (see Figures 4-5a).

It would have been obvious for one of ordinary skill in the art to provide the toothbrush device of Kott with a manual toothbrush having a toothbrush head having bristle tufts with cleaning elements that are pivotally mounted, as Halm teaches, so to

Art Unit: 1744

allow the cleaning elements respond to the contour of the teeth and the pressure applied to the teeth by the user, and further it would have been obvious for one of ordinary skill in the art to substitute the pivotally mounted cleaning elements of Kott and Halm to be elastomeric fins having a textured surface, as Shipp teaches, in order to retain tooth cleaning material and to act as a prophy device for cleaning teeth.

8. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kott, USPN 3,196,299 and Braun et al., USPN 6,553,604 as applied to Claim 35, in view of Kressner et al., USPN 6,021,538.

Kott and Braun et al. disclose all elements above, however do not disclose specific dimensions of the support member.

Kressner et al. disclose a toothbrush head having a support member with a top surface having an overall surface area from about 170 to 200mm<sup>2</sup> (Column 3 Lines 47-50; when the diameter is 15mm the area is 176.625 mm<sup>2</sup>.) The top surface has a major of 15mm, which falls into the range of having a length of about 14 to 19 mm and a width of about 12 to 15mm (see Column 3 Lines 47-50).

It would have been obvious for one of ordinary skill in the art to modify the specific dimensions of the support member of the toothbrush head of Kott and Braun et al. to have an overall surface area from about 170 to 200mm<sup>2</sup>, a length of about 14 to 19 mm, and a width of 12 to 15 mm, as Kressner et al. teach, in order to have a reasonable sized toothbrush head capable of sufficiently cleaning the oral cavity.

Art Unit: 1744

9. Claims 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun et al., USPN 6,553,604 as applied to Claim 43 in view of Kressner et al., USPN 6,021,538.

Braun et al. disclose all elements above, however do not disclose specific dimensions of the support member.

Kressner et al. disclose a toothbrush head having a support member with a top surface having an overall surface area from about 170 to 200mm<sup>2</sup> (Column 3 Lines 47-50; when the diameter is 15mm the area is 176.625 mm<sup>2</sup>.) The top surface has a major of 15mm, which falls into the range of having a length of about 14 to 19 mm and a width of about 12 to 15mm (see Column 3 Lines 47-50).

It would have been obvious for one of ordinary skill in the art to modify the specific dimensions of the support member of the toothbrush head of Braun et al. to have an overall surface area from about 170 to 200mm<sup>2</sup>, a length of about 14 to 19 mm, and a width of 12 to 15 mm, as Kressner et al. teach, in order to have a reasonable sized toothbrush head capable of sufficiently cleaning the oral cavity.

### ***Conclusion***


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Cole whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

Art Unit: 1744

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on (571) 272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LCC  
LCC  
24 October 2005

  
MARK SPISICH  
PRIMARY EXAMINER  
GROUP 3400  
1706